South Coast
Air Quality Management District
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March 16, 2012

Ms. Alan Solomon
Project Manager
Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

Subject: Presiding Member's Proposed Decision (PMPD) for the Watson Cogeneration Steam and Electric Reliability Project (09-AFC-01)

Dear Mr. Solomon:

The purpose of this letter is to transmit to the California Energy Commission (CEC) the South Coast Air Quality Management District (District) staff's comments regarding the Presiding Member's Proposed Decision (PMPD) for the Watson Cogeneration Steam and Electric Reliability Project (09-AFC-01), issued on February 15, 2012.

The comments below pertain to the Conditions of Certification relating to Air Quality, found on pages 6.2-19 through 6.2-42 of the PMPD.

- Condition AQ-1 does not state the emissions factor for calculating VOC emissions, when firing natural gas. The following statement should be added: The operator shall calculate emissions by using monthly fuel use data and an emissions factor 2.64 lbs VOC/MMscf for Natural Gas.

- Condition AQ-2 should state NOx emissions from the new cogeneration unit shall not exceed 39.9 tons per year (not "oxides of nitrogen from the facility that exceed the RECLAIM Trading Credits holdings of 39.9 tons/year"). The basis of this limit is exemption from PSD applicability for NOx. It is not based on a RECLAIM limit.

- Condition AQ-5 should be eliminated or re-worded. It appears to allow exceedance of the mass or concentration limits, but not both. Such an allowance is appropriate only for combustion contaminant emissions (i.e. particulate emissions) for compliance with Rules 475 and 476. Otherwise, both mass and concentration limits should always be met.

- Condition AQ-6 is not clear. In this condition the natural gas component of refinery gas should be defined as follows "natural gas component of the mixture (formed at a point upstream of the sampling location for Total Reduced Sulfur concentration) does not exceed 50% of the total, by Higher Heating Value (HHV) content." Also, the fuel gas limits of 162 ppm H2S (3 hour average) and 60 ppm H2S (365 day average) are applicable only to refinery gas, so "fuel gas" should be changed to "refinery gas" in the sentence prior to the table stating these limits.

- In condition AQ-7 the source test should be conducted "within 90 days after achieving maximum production rate, but no later than 180 days after initial start-up." The ammonia test should be conducted according to SCAQMD Method 207.1. SCAQMD Method 5.3 measures PM, not ammonia. Additionally, PM10 concentration data should be reported in the form of grains per dry standard cubic feet of gas exhausted, not in "grains per dry standard cubic feet of fuel burned."

- Again, condition AQ-8 refers to using SCAQMD Method 5.3 for ammonia testing. This method is applicable to PM testing. The method used for ammonia testing should be SCAQMD Method 207.1. The report should be submitted to the CPM and SCAQMD within 60 days of testing, not 45 days of testing.

- With respect to condition AQ-9, the District is also requiring a SOx CEMS (with similar certification requirements as the NOx CEMS).

- Regarding condition AQ-11, the ammonia slip equation in the FDOC is below. The equation cited in condition AQ-11 has a factor of 1.2, not found in the FDOC equation, and the variable "b" is defined differently.

  NH3(ppmv) = [a-(b*c)/1E6]*1E6/b
  where,
  a= NH3 injection rate (lb/hr)/17(lb/lbmole)
  b= dry exhaust gas flow rate(lb/hr)/29(lb/lbmole)
  c= change in measured NOx across the SCR (ppmvd at 15 percent O2).

  Also, this condition should be amended to state that the number of warm startups allowed annually is 24 and the number of shutdowns allowed annually is 29.

- Condition AQ-13 requires that the SCR Inlet temperature be maintained between 740 and 840°F. This is probably the expected range for the SCR Inlet temperature. The District permit states that ammonia injection is not required if the SCR Inlet temperature falls below 500 F.

- Regarding condition AQ-14 it is not clear if it only requires monitoring of the differential pressure across the SCR catalyst bed, or if it also requires monitoring of differential pressure across the CO catalyst. The District permit requires monitoring of the differential pressure only across the SCR catalyst bed.

If you have any questions regarding this letter, please contact me at (909) 396-2664 or by email at jchen@aqmd.gov, or Rafik Beshai, Air Quality Engineer, at (909) 396-3611 or rbeshai@aqmd.gov.

Very truly yours,

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